

ABSTRACT

The tableware according to the invention comprises Ti or a Ti alloy and has a surface hard layer comprising a first hardened layer which is formed in the region of an arbitrary depth from the surface and in which nitrogen and oxygen are diffused so as to form a solid solution and a second hardened layer which is formed in an arbitrary region deeper than the first hardened layer. The purpose of the process for surface treatment of tableware according to the invention is to form the surface hard layer. The substrate having a hard decorative coating film according to the invention is a substrate comprising Ti or a Ti alloy and having on its surface an internal hardened layer comprising a first hardened layer and a second hardened layer, wherein the hard decorative coating film is formed on the surface of the internal hardened layer. The cutlery according to the invention comprises a working part and a grip, and the grip is provided with a floating means such as a hollow part. According to the invention, titanium tableware having excellent long-term mar resistance and appearance quality is obtained, and the decorative value of the tableware can be increased. Further, a process for surface treatment to obtain the titanium tableware with high productivity can be provided. According to the invention, there can be provided a substrate having a hard decorative coating film, which shows excellent mar resistance and high surface hardness, and a process for producing the substrate. Since the cutlery of the invention floats in water, contact

of cutlery with one another hardly takes place. Therefore, the cutlery is not marred easily. Moreover, the cutlery is lightweight and can be easily handled.

TESTER - ESD-1
10013333 - ESD-1